DEPARTMENT OF TRANSPORTATION
HAZARDOUS MATERIALS REGULATIONS BOARD
WASHINGTON, D.C. 20590

Hazardous Materials Regulations Board

[49 CFR Parts 170–189]

[Docket No. HM–4]

TRANSPORTATION OF PESTICIDES

Advance Notice of Proposed Rule Making; Request for Public Advice

The use of liquid class B poisons (particularly pesticides) is increasing rapidly throughout the United States. From reported incidents, we believe the leakage of liquid pesticides during transportation is also increasing rapidly. Accordingly, it is important that the present regulations be reviewed to determine whether they provide an adequate level of safety for the transportation of these poisons.

This advance notice of proposed rule making invites the public to advise us on the reasons for the leakage, the resulting safety hazard, and appropriate regulatory action. We invite advice only on liquid poisons in this proceeding.

Recent regulatory action. On December 21, 1967, the Department published Amendment No. 67–1 (32 F.R. 20982) in Docket No. HM–4, Miscellaneous Restrictions Against Loading and Transporting Class B Poisonous Liquids or Solids with Foodstuffs. This regulation restricted transportation of any Class B poison in the same vehicle with foodstuffs, feeds, or any other material intended for consumption by humans or animals. The amendment also provided for inspection and decontamination of vehicles.

This regulation sought to minimize harm resulting from leaks, but it did nothing to prevent leaks. Further, it applies only to foodstuffs and feeds, not to clothing, cosmetics, and other consumer items capable of transmitting the poisons.

Numerous petitions and complaints were filed with the Board since issuance of Amendment 67–1. The Board has issued a notice of proposed rule making (Notice No. 69–12, Docket No. HM–4, 34 F.R. 7456) to resolve some of these problems by clarifying the language, adopting additional restrictions on the commingling of poisons and foodstuffs and making the rule also applicable to Class A poisons.

Facts. Our knowledge of the number of leaks and the quantities of poisons which escaped is limited to major spills. We do not have a system for collecting information on all accidents and incidents. We are developing such a system, but it is of no help in this instance.

From the limited information we have, we know that hundreds of containers of class B poisons leaked last year. This leads us to believe that thousands of leaks actually occurred during transportation. A substantial number of the leaks were of the more toxic class B poisons.

We do not know of any deaths in the United States resulting from these leaks, but there have been hundreds of deaths abroad from similar leaks.

The following examples of recent poison leaks were selected to show that leaks occur (i) in more than one container on some shipments, (ii) in drums of different sizes, built to different specifications, (iii) in seams, chimes, heads, and closures, and (iv) in both truck and train transport. The containers were made by different manufacturers, filled with different poisons by different shippers, and shipped via different carriers.

Date of incident	Number of leakers	Size and specification	Description of leaks	Kind of carrier
Jan. 16, 1969	3	30-gal. 17E	Side seams	Truck.
Jan. 28, 1969	2	55-gal. 17E	Seams and chimes	Train.
Feb. 7, 1969	2	55-gal. 17C	Seams and top chimes	Do.
Feb. 13, 1969	2	5-gal. 17E	Bottom heads	Do.
Feb. 17, 1969	2	55-gal. 17E	do	Truck.
Feb. 17, 1969	5	55-gal. 17E	do	Do.
Mar. 4, 1969	17	55-gal. 17C	Loose closures	Train.
Mar. 18, 1969	5	55-gal. 17C	Side seam and loose closures	Do.

Safety problems. During the past year we have worked with shippers, carriers, container manufacturers, and Federal and State govenment officials, seeking the precise causes of the leaks. The number of leaks indicate a need for regulation, but we need more precise information to determine what regulation is needed. The first step is to define the safety problems: the causes of the leaks.

The principal safety problems appear to be inadequacy of containers and carelessness of shippers. Theoretically, the authorized containers are adequate, if the manufacturers, shippers, and carriers carefully follow all regulatory requirements. Actually, many of the containers leak during transit. It follows that our safety standards are not high enough; they are not people-proof; they do not provide a margin for predictable error.

More particularly, these are areas of inquiry to define the safety problems:

1. Whether the authorized containers, such as Specification 17E and possibly others of the Specification 17 series, are adequate for the transportation of the more toxic materials. This inquiry covers everything which contributes to container integrity, such as gauge and quality of the steel, quality and resilience of lining material, the manufacturing process, inspection and quality control, and testing of finished containers.

2. Whether the leaks result from improper filling and closing of containers. If so, is it because the regulations are inadequate or because the regulations are not followed? If they are not followed, is it because of practical or other problems of complying with the regulations?

3. Whether the leaks result from damage in transit. If so, is it because the regulations are inadequate or because the regulations are not followed? If they are not followed, is it because of practical or other problems of complying with the regulations?

4. Whether regulatory standards should be higher for the more toxic class B poisons.

Possible solutions. As we have been defining the safety problems, we have been considering possible solutions. We have received specific recommendations from the California State Health Department, the National Agricultural Chemicals Association, and the Steel Shipping Container Institute. These are some of the regulatory solutions which we are considering:

1. Require shippers (where appropriate, this term includes the person who fills the container) to use containers produced by manufacturers approved by the Hazardous Materials Regulations Board. Provide for the Board to withdraw approval from manufacturers who do not meet regulatory standards.

2. Prohibit use of Specification 17E and possibly others of the Specification 17 series.

3. Improve integrity of presently authorized containers (for example, by raising the specification standards for gauge of steel or quality of steel, or both) with particular attention to drum heads.

4. Require manufacturing procedures which will not unduly stress the steel.

5. Require comprehensive nondestructive testing of each container and complete destructive testing of frequent random samples, relating test procedures to the actual use for which the container is built.

6. Establish quality standards for lining material, including sufficient resilience to withstand transportation shocks without cracking.

7. Require quality control procedures which will ensure that the manufacturer meets regulatory standards.

8. Require shippers to inspect each container before filling, to ensure that it has not been damaged in transit to him; prohibit use of damaged containers.

9. Require shippers to leave enough outage after filling so that container can be closed without overflow.

10. Require shippers to use fail-safe closure devices and attachment procedures.

11. Require shippers to inspect and clean each container after filling.

12. Require shippers to observe containers in both the upright and inverted positions long enough to detect leaks.

13. Require shippers to palletize or crate (bottom, side, and top protection) all shipments of small containers.

14. Require shippers to inspect each container after storage and before shipment.

15. Require shipper to furnish, and carrier to have, precise chemical name and emergency instructions with each shipment.

16. Prescribe stowage rules, including vertical bulkheads between poisons and other freight, horizontal partitions between layers of containers, and stack height limitations.

17. Prohibit trailer-on-flat-car carriage.

18. Require "poison" label on each package, even in truckload or carload lots, and placard on each truck, even when the amount of poison is less than 1,000 pounds.

19. Impose routing and stop-over restrictions, to limit extent of public exposure.

20. Require shipment in fully enclosed vehicles, to lessen chance of loss of containers.

21. Prohibit shipment on vehicles which have wooden floors, because of difficulty of decontamination after a leak.

22. Prescribe rules for handling contaminated freight and decontaminating vehicles.

Scope of notice. This is not a proposal to change the regulations. It is an effort to obtain public participation early in the rule-making process. It is an effort to develop facts upon which to base rational rule making. We invite the general public to advise us on all aspects of this subject.

We invite interested persons to give us their views by July 21, 1969. Advice (identifying the docket number) should be submitted in duplicate to the Secretary, Hazardous Materials Regulations Board, Department of Transportation, 400 Sixth Street SW., Washington, D.C. 20590.

Issued in Washington, D.C., on May 5, 1969.

WILLIAM C. JENNINGS,
Director,
Office of Hazardous Materials.

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